IN THE SPECIFICATION:

Please replace paragraph 1 at page 17 continuing onto page 18, with the following rewritten paragraph:

Hence, if a video file and an audio file in the AV independent format are transmitted from the disk apparatus 1 to the AV apparatus 5 and 6, the AV apparatus 5 and 6 as standard apparatus cannot handle video data and audio data disposed in the bodies of the video file and the audio file in the AV independent format unless the AV apparatus 5 and 6 support the AV independent format, but the AV apparatus 5 and 6 can handle the video file and the audio file in the AV independent format themselves. That is, the video file and the audio file in the AV independent format include a header, a body, and a footer as with files in the standard AV multiplex format. As the header and the footer, a header and a footer in the same format as that of files in the standard AV multiplex format are used. Therefore, unless "contents" of the body (data disposed in the body) are referred to, the video file and the audio file in the AV independent format themselves are equivalent to files in the standard multiplex AV format (comply with the standard AV multiplex format). Thus, even when the AV apparatus 5 and 6 as standard apparatus do not support the AV independent format, the AV apparatus 5 and 6 can handle the video file and the audio file in the AV independent format themselves.

Please replace paragraph 1 at page 27, with the following rewritten paragraph:

As described above, the standard AV multiplex format is suitable for streaming because video data and audio data are multiplexed in frame units in the standard AV multiplex format. However, the standard AV multiplex format makes it difficult to perform AV independent editing in which video data and audio data are edited separately from each other.

Please replace paragraph 3 at page 27, with the following rewritten paragraph:

Further, the AES3 format usable in the standard AV multiplex format specifies assignment of at least four bytes to one sample of audio data, thus increasing size of the file as a whole.

Please replace paragraph 5 at page 33 continuing onto page 34, with the following rewritten paragraph:

Further, in the AV independent format, the audio data is in the WAVE format, and therefore the amount of data can be reduced as compared with the case where audio data in the AES3 format is used as in the standard AV ~~independent~~ multiplex format. As a result, in recording the files in the AV independent format onto a storage such as the optical disk 7 or the like, storage space required for the recording can be reduced as compared with the case of recording the file in the standard AV multiplex format.

Please replace paragraphs 3 and 4 at page 43, with the following rewritten paragraphs:

A filler generated by the filler generating unit ~~54~~ 67 is added to the header, the body, or the footer of the video file, whereby the data amounts of the header, the body, and the footer are adjusted to be an integral multiple of the ECC block length of the optical disk 7.

Thus, when the video file is written to the optical disk 7, recording of the header, the body, or the footer in a part of an ECC block is prevented, so that the ~~video~~ audio file can be read and written more efficiently.

Please replace paragraphs 1 and 2 at page 49, with the following rewritten paragraphs:

The standard/independent converting unit 21 in FIG. ~~8~~ 7 performs a master file generating process for generating the master file as a file in the AV independent format, a metadata file generating process for generating each of the file unit metadata file and the frame unit metadata file, an auxiliary file generating process for generating the auxiliary file, a video file generating process for generating the video file, and an audio file generating process for generating the audio files.

The master file generating process, the metadata file generating process, the auxiliary file generating process, the video file generating process, and the audio file generating process performed by the standard/independent converting unit 21 will now be described with reference to flowcharts of FIGS. 11 to ~~13~~ 16.

Please replace the paragraph bridging pages 49 and 50 with the following rewritten paragraph:

When a file in the standard AV multiplex format is supplied to and stored in the buffer 31 (FIG. 8), for example, the master file generating process is started. First, in step S1, the master file generating unit 32 (FIG. 8) generates file names of a file unit metadata file, a frame unit metadata file, an auxiliary file, a video file, and an audio file of each channel. The process proceeds to step S2. In step S2, the master file generating unit 32 generates a master file describing a link to the file of each file name generated in step S1 in XML. The master file generating unit 32 supplies the master file to the buffer 44 to store the master file in the buffer 44. Then the master file generating process is ended.

Please replace paragraph 2 at page 50 continuing onto page 51, with the following rewritten paragraph:

When a file in the standard AV multiplex format is supplied to and stored in the buffer 31 (FIG. 8), for example, the file unit metadata file generating process is started. First, in step S11, the header obtaining unit 33 obtains a header from the file in the standard AV multiplex format stored in the buffer 31. The header obtaining unit 33 supplies the header to the header metadata extracting unit 35. The process proceeds to step S12. In step S12, the header metadata extracting unit 35 extracts header metadata from the header supplied from the header obtaining unit 33. The header metadata extracting unit 35 supplies file unit metadata disposed in the header metadata to the metadata file generating unit 37. The process proceeds to step S13. In step S13, the metadata file generating unit 37 generates a file unit metadata file in which the file unit metadata supplied from the header metadata extracting unit 35 is disposed. The metadata file generating unit 37 supplies the file unit metadata file to the buffer 44 to store the file unit metadata file in the buffer 44. Then the file unit metadata file generating process is ended.

Please replace paragraph 2 at page 51 continuing onto page 52, with the following rewritten paragraph:

When a file in the standard AV multiplex format is supplied to and stored in the buffer 31 (FIG. 8), for example, the frame unit metadata file generating process is started. First, in step S21, the body obtaining unit 34 obtains a body from the file in the standard AV multiplex format stored in the buffer 31. The body obtaining unit 34 supplies the body to the system item processing unit 36. The process proceeds to step S22. In step S22, the system item processing unit 36 extracts a system item having frame unit metadata disposed therein from each edit unit of the body supplied from the body obtaining unit 34. The system item processing unit 36 then supplies the

system item to the metadata file generating unit 37. The process proceeds to step S23. In step S23, the metadata file generating unit 37 adds a filler to the system item of each edit unit supplied from the system item processing unit 36. The process proceeds to step S24.

Please replace paragraph 3 at page 52 continuing onto page 53, with the following rewritten paragraph:

In step S29, the metadata file generating unit 37 generates a header. The process proceeds to step S30. In step ~~S27~~ S30, the metadata file generating unit 37 generates a filler for the header. The metadata file generating unit 37 supplies the header having the filler added thereto to the buffer 44. The process proceeds to step S31. In step S31, the buffer 44 outputs the header. Then, the frame unit metadata file generating process is ended.

Please replace paragraph 2 at page 53 continuing onto page 54, with the following rewritten paragraph:

When a file in the standard AV multiplex format is supplied to and stored in the buffer 31 (FIG. 8), for example, the auxiliary file generating process is started. First, in step S41, the body obtaining unit 34 obtains a body from the file in the standard AV multiplex format stored in the buffer 31. The body obtaining unit 34 supplies the body to the auxiliary item extracting unit 38. The process proceeds to step S42. In step S42, the auxiliary item extracting unit 38 extracts an auxiliary item from each edit unit of the body supplied from the body obtaining unit 34. The auxiliary item extracting unit 38 then supplies the auxiliary item to the auxiliary file generating unit 39. The process proceeds to step S43. In step S43, the auxiliary file generating unit 39 combines auxiliary items of edit units supplied from the auxiliary item extracting unit 38 with each other, and thereby generates an auxiliary file in which the auxiliary items of the edit units

are disposed en bloc. The auxiliary file generating unit 39 supplies the auxiliary file to the buffer 44 to store the auxiliary file in the buffer 44. Then the auxiliary file generating process is ended.

Please replace paragraph 2 at page 54 continuing onto page 55, with the following rewritten paragraph:

When a file in the standard AV multiplex format is supplied to and stored in the buffer 31 (FIG. 8), for example, the video file generating process is started. First, in step S51, the body obtaining unit 34 obtains a body from the file in the standard AV multiplex format stored in the buffer 31. The body obtaining unit 34 supplies the body to the picture item extracting unit 40. The process proceeds to step S52. In step S52, the picture item extracting unit 40 extracts a picture item from each edit unit of the body supplied from the body obtaining unit 34. The picture item extracting unit 40 then supplies the picture item to the video file generating unit 41. The process proceeds to step S53. In step S53, the combining unit 51 in the video file generating unit 41 (FIG. 9) combines the picture item of each edit unit supplied from the picture item extracting unit 40, and thereby generates a body in which picture items of edit units are disposed en bloc. The process proceeds to step S54.

Please replace paragraph 1 at page 58, with the following rewritten paragraph:

When a file in the standard AV multiplex format is supplied to and stored in the buffer 31 (FIG. 8), for example, the audio file generating process is started. First, in step S71, the body obtaining unit 34 obtains a body from the file in the standard AV multiplex format stored in the buffer 31. The body obtaining unit 34 supplies the body to the sound item extracting unit 42. The process proceeds to step S72. In step S72, the sound item extracting unit 42 extracts a sound item from each edit unit of the body supplied from the body obtaining unit 34. The sound item extracting unit 42 then supplies the sound item to the audio file generating unit 43. The process

proceeds to step S73. In step S73, the KLV decoder 61 in the audio file generating unit 43 (FIG. 10) disintegrates the KLV structure of audio data disposed in the sound item of each edit unit, and supplies multiplexed eight-channel audio data (multiplexed audio data) obtained as a result of the disintegration to the channel separating unit 62. The process proceeds to step S74.

Please replace paragraph 1 at page 60, with the following rewritten paragraph:

In step S80, the footer generating unit 66 generates a footer for each channel. The process proceeds to step S81. In step S81, the filler generating unit 67 generates a filler for the footer of each channel which filler is adjusted in data amount so that a data amount of the footer is an integral multiple of an ECC block. The process proceeds to step S82. In step S82, the ~~video~~ audio file generating unit ~~41~~ 43 outputs the footer of each channel. The process proceeds to step S83.

Please replace paragraphs 1 and 2 at page 60 continuing onto page 61, with the following rewritten paragraph:

In step S80, the footer generating unit 66 generates a footer for each channel. The process proceeds to step S81. In step S81, the filler generating unit 67 generates a filler for the footer of each channel which filler is adjusted in data amount so that a data amount of the footer is an integral multiple of an ECC block. The process proceeds to step S82. In step S82, the ~~video~~ audio file generating unit ~~41~~ 43 outputs the footer of each channel. The process proceeds to step S83.

In step S83, the header generating unit 65 generates a header for each channel. The process proceeds to step S84. In step S84, the filler generating unit ~~54~~ 67 generates a filler for the header of each channel which filler is adjusted in data amount so that a data amount of the header and the key and the length of the audio data is an integral multiple of an ECC block. The

process proceeds to step S85. In step S85, the ~~video~~ audio file generating unit ~~41~~ 43 outputs the header of each channel. Then the audio file generating process is ended. In step S85, the key and the length of the audio data are outputted together with the header of each channel.

Please replace paragraph 1 at page 68, with the following rewritten paragraph:

As described above, the data converting unit 118 in FIG. ~~16~~ 17 supplies not only the data series of main line data (the video file and the audio file) but also the data series of metadata and low resolution data to the memory controller 116. Then, the main line data, the metadata, and the low resolution data supplied to the memory controller 116 are supplied to the optical disk 7 and recorded onto the optical disk 7.

Please replace paragraph 1 at page 69, with the following rewritten paragraph:

Disposed in a footer of the low resolution data file are a footer partition pack (~~Footter~~ Footer Partition Pack) and header metadata (Header Metadata). The header metadata in the footer is an option.

Please replace paragraph 4 at page 73 continuing onto page 74, with the following rewritten paragraph:

A file processing unit 162 recognizes file names of the file unit metadata file, the frame unit metadata file, the auxiliary file, the video file, and the audio file of each of the eight channels by referring to the master file stored in the buffer 161. On the basis of the file names, the file processing unit 162 obtains the file unit metadata file, the frame unit metadata file, the auxiliary file, the video file, and the audio file of each of the eight channels from the format converting unit 12 via the buffer 161. Further, the file processing unit ~~102~~ 162 supplies the obtained file unit metadata file and the frame unit metadata file to a metadata file processing unit

163, supplies the video file to a video file processing unit 164, and supplies the audio file of each of the eight channels to an audio file processing unit 165.

Please replace paragraph 1 at page 75, with the following rewritten paragraph:

The audio file processing unit 165 extracts audio data of each channel from the audio file of each of the eight channels supplied from the file processing unit 162, and generates low-bit-rate audio data from the extracted ~~picture items~~ audio data. Further, the audio file processing unit 165 constructs sound essences obtained by multiplexing and disposing the audio data of each channel, and then supplies the sound essences to the data synthesizing unit 166.

Please replace paragraphs 1 and 2 at page 87, with the following rewritten paragraph:

Incidentally, values of the audio annual ring size T_{sa} and the video annual ring size T_{sv} set in ~~step S1~~ step S231 may be a predetermined fixed value or a variable value. When the values of the audio annual ring size T_{sa} and the video annual ring size T_{sv} are a variable value, the variable value can be inputted by operating the operating unit 120, for example.

The low-resolution annual ring size T_{sl} is a variable for determining a data amount of low resolution data to be disposed and recorded en bloc on the optical disk 7. As with the audio annual ring size T_{sa} and the video annual ring size T_{sv} described above, the low-resolution annual ring size T_{sl} is for example represented by a reproduction time of a video file (or an audio file) as an original for the low resolution data. Similarly, the meta annual ring size $\cancel{T_s}$ $\underline{T_{sm}}$ is a variable for determining a data amount of metadata to be disposed and recorded en bloc on the optical disk 7. As with the audio annual ring size T_{sa} and the video annual ring size T_{sv} described above, the meta annual ring size T_{sm} is represented by a reproduction time of a video file (or an audio

file) whose various information (for example a date and time of image pickup) is described by the metadata.

Please replace paragraph 4 at page 94, with the following rewritten paragraph:

In step S252, ~~as in step S12 in FIG. 5,~~ the control unit 119 determines whether $T_{sa} \times N_a$ is $T_{sv} \times N_v$ or less, and determines whether $T_{sa} \times N_a$ is $T_{sl} \times N_l$ or less and $T_{sm} \times N_m$ or less.

Please replace paragraph 1 at page 95 continuing onto page 96, with the following rewritten paragraph:

T_{sl} is low-resolution annual ring size. As described later, the variable N_l is incremented by one each time low resolution data (low-resolution annual ring data) in a data amount based on the low-resolution annual ring size ~~T_{se}~~ $\underline{T_{sl}}$ is recorded on the optical disk 7 in the low resolution data recording task. Further, T_{sm} is meta annual ring size. As described later, the variable N_m is incremented by one each time metadata (meta annual ring data) in a data amount based on the meta annual ring size T_{sm} is recorded on the optical disk 7 in the metadata recording task. Hence, $T_{sl} \times N_l$ corresponds to a last reproduction time of low-resolution annual ring data to be recorded onto the optical disk 7 from now on in a case where the low resolution data is recorded in units of the low-resolution annual ring size ~~T_{se}~~ $\underline{T_{sl}}$. $T_{sm} \times N_m$ corresponds to a last reproduction time of meta annual ring data to be recorded onto the optical disk 7 from now on in a case where the metadata is recorded in units of the meta annual ring size T_{sm}.

Please replace paragraph 2 at page 100 continuing onto page 101, with the following rewritten paragraph:

FIG. 35 shows a relation between an aggregate amount of data (aggregate data amount) La of the audio file stored in the memory 117 and time (reproduction time). Small arrows

indicating a vertical direction (arrows indicating intervals between dotted lines in a horizontal direction) on a right side in FIG. ~~6~~ 35 denote an ECC block data amount Bu. A dotted line Lv in FIG. 35 represents an aggregate amount of data (aggregate data amount) Lv of the video file stored in the memory 117, the data amount being indicated by a solid line in FIG. ~~9~~ 38 to be described later. In FIG. 35, the aggregate data amount La of the audio file forms a straight line, and therefore a data rate of the audio file is fixed. However, the data rate of the audio file can be a variable data rate.

Please replace paragraph 1 at page 105, with the following rewritten paragraph:

As described above, the audio file has a data amount that is an integral multiple of the data amount of an ECC block. Thus, in step ~~S253~~ S258, the audio annual ring data having the data amount that is an integral multiple of the data amount of an ECC block is recorded in ECC blocks corresponding in number to the integral multiple.

Please replace paragraph 4 at page 105 with the following rewritten paragraph:

The video file recording task started in step S234 in FIG. 33 will next be described with reference to a flowchart of FIG. ~~36~~ 37.

Please replace paragraph 1 at page 109, with the following rewritten paragraph:

When the control unit 119 determines in step S262 that the reproduction time $T_{sv} \times N_v$ of the video annual ring data is less than the reproduction time $T_{sa} \times N_a$ of the audio annual ring data, is the reproduction time $T_{sl} \times N_l$ of the low-resolution annual ring data or less, and is the reproduction time $T_{sm} \times N_m$ of the meta annual ring data or less, that is, when the present timing is the timing to record the video annual ring data of interest, the process proceeds to step S263, where the control unit 119 determines whether the video file is being supplied from the data

converting unit 118 to the memory 117 via the memory controller 116. When the control unit 119 determines that the video file is being supplied from the data converting unit 118 to the memory 117 via the memory controller 116, the process proceeds to step ~~S24~~ S264.

Please replace paragraph 2 at page 110 continuing onto page 111, with the following rewritten paragraph:

FIG. ~~40~~ 38 shows a relation between an aggregate amount of data (aggregate data amount) ~~La~~ Lv of the video file stored in the memory 117 and time (reproduction time). As in FIG. 35, small arrows indicating a vertical direction (arrows indicating intervals between dotted lines in a horizontal direction) on a right side in FIG. ~~40~~ 38 denote an ECC block data amount Bu. A dotted line La in FIG. ~~40~~ 38 represents an aggregate amount of data (aggregate data amount) La of the audio file stored in the memory 117, the data amount being indicated by the solid line in FIG. 35 described above.

Please replace paragraph 1 at page 111, with the following rewritten paragraph:

In FIG. ~~40~~ 38, when $N_v = 1$, for example, a data amount of the video file necessary for reproduction for the time $T_{sv} \times N_v$ (= 1) is VN1'. Thus, in step S264 when $N_v = 1$, it is determined that the video file having the amount corresponding to the reproduction time $T_{sv} \times N_v$ is stored in the memory 117 when the video file having an aggregate data amount of VN1' is stored in the memory 117. The process proceeds to step S265.

Please replace paragraph 1 at page 112, with the following rewritten paragraph:

When the time in FIG. ~~40~~ 38 described above is $1 \times T_{sv}$, at least the video file having the data amount VN1' is stored in the memory 117. The data amount VN1' is larger than a data amount of four ECC blocks but smaller than a data amount of five ECC blocks. Therefore, in

step S265, a video file having an amount of VN1, which is the data amount Bu of four ECC blocks, is read and thereby extracted as video annual ring data of interest from the memory 117.

Please replace paragraph 3 at page 112 continuing onto page 113, with the following rewritten paragraph:

Returning to FIG. ~~39~~ 37, in step S266, the control unit 119 supplies the signal processing unit 115 with the video annual ring data of interest having the data amount that is an integral multiple of the data amount of an ECC block which data is obtained in step S265 from the memory controller 116, and thereby performs recording control such that the video annual ring data of interest having the data amount that is an integral multiple of the data amount of an ECC block is recorded in ECC blocks corresponding in number to the integral multiple.

Please replace paragraph 1 at page 113, with the following rewritten paragraph:

At the time of $1 \times T_{sv}$ in FIG. ~~40~~ 38, the video file having the data amount Bu of four ECC blocks is supplied as the video annual ring data of interest from the memory controller 116 to the signal processing unit 115. Then, the video annual ring data of interest in the data amount Bu of four ECC blocks is supplied to the pickup unit 112. The video annual ring data of interest is then recorded in ECC blocks #2, #3, #4, and #5, which are four ECC blocks of the optical disk 7, such that boundaries of the video annual ring data coincide with boundaries of the ECC blocks #2 to #5 (a boundary on a front side of the ECC block #2 and a boundary on an end side of the ECC block #5) of the optical disk 7 as shown in FIG. 36 described above.

Please replace paragraph 2 at page 113 continuing onto page 114, with the following rewritten paragraph:

Specifically, supposing for simplicity of description that the audio annual ring size T_{sa} and the video annual ring size T_{sv} are equal to each other, the latest audio annual ring data before

the reproduction time $T_{sa} \times N_a$ is recorded in the ECC block #1 as shown in FIG. 36 when $\cancel{N_a}$ $\underline{N_v}$ = $\cancel{N_a}$ $\underline{N_v}$ = 1 after the audio file recording task of FIG. 34 and the video file recording task of FIG. ~~39~~ 37 are started. The audio annual ring data is recorded in the ECC block #1, whereby the variable N_a is incremented by one to become $N_a = 2$ in step S257 in the audio file recording task of FIG. 34. At this time, the variable N_v still remains one. Therefore the reproduction time $\cancel{T_{sa}}$ $\underline{T_{sv}}$ $\times$ $\cancel{N_a}$ $\underline{N_v}$ becomes less than the reproduction time $T_{sa} \times N_a$. Consequently, the latest video annual ring data before the reproduction time $T_{sv} \times N_v$ is recorded in the ECC blocks #2 to #5 in step S266 in the video file recording task of FIG. ~~39~~ 37.

Please replace paragraph 1 at page 115, with the following rewritten paragraph:

Thus, the audio annual ring data and the video annual ring data obtained when $\cancel{N_a}$ $\underline{N_v}$ = $\cancel{N_a}$ $\underline{N_v}$ = 1, that is, the latest audio annual ring data before the reproduction time $T_{sa} \times N_a$ and the latest video annual ring data before the reproduction time $T_{sv} \times N_v$ equal to the reproduction time $T_{sa} \times N_a$, that is, the audio annual ring data and the video annual ring data for similar reproduction time periods are disposed and recorded at positions adjacent to each other on the optical disk 7.

Please replace paragraph 3 at page 116 continuing onto page 117, with the following rewritten paragraph:

Thus, in the video file recording task of FIG. ~~36~~ 37, as in the ~~video~~ audio file recording task of FIG. 34, video annual ring data having a data amount that is an integral multiple of the data amount of an ECC block, for example, as a unit of reading and writing of the optical disk 7 is periodically recorded in ECC blocks corresponding in number to the integral multiple such

that boundaries of the video annual ring data coincide with ECC block boundaries of the optical disk 7.

Please replace paragraph 4 at page 123 continuing onto page 124, with the following rewritten paragraph:

When the metadata recording task is started, the control unit 119 in first step S281 initializes a variable ~~N_l~~ $\underline{N_m}$ to be incremented by one in a process of step S287 to be described later to one, for example. The process proceeds to step S282.

Please replace paragraph 3 at page 124 continuing onto page 125, with the following rewritten paragraph:

When the control unit 119 determines in step S282 that the reproduction time $T_{sm} \times N_m$ of the meta annual ring data is not less than the reproduction time $T_{sa} \times N_a$ of the audio annual ring data, is not less than the reproduction time $T_{sv} \times N_v$ of the video annual ring data, or is not less than the reproduction time $T_{sl} \times N_l$ of the <u>low-resolution</u> ~~meta~~ annual ring data, that is, when the present timing is not the timing to record the meta annual ring data of interest, the process returns to step S282 to repeat the same process from step S282 on down.

Please replace paragraph 3 at page 139 continuing onto page 140, with the following rewritten paragraph:

Supposing that the audio annual ring size T_{sa} shown in FIG. 42, the video annual ring size T_{sv} shown in FIG. 43, the low-resolution annual ring size T_{sl} shown in FIG. 44, and the meta annual ring size T_{sm} shown in FIG. 45 have relations such that the video annual ring size T_{sv} is equal to the audio annual ring size T_{sa}, and such that the low-resolution annual ring size T_{sl} and the meta annual ring size T_{sm} are equal to twice the audio annual ring size T_{sa} ($2 \times T_{sa} = 2 \times T_{sv}$

$= T_{sl} = T_{sm}$), for example, the audio file recording task of FIG. 34, the video file recording task of FIG. 37, the low resolution data recording task of FIG. 39, and the metadata recording task of FIG. 40 periodically record the audio annual ring data #1 to #4 in FIG. 42, the video annual ring data #1 to #4 in FIG. 43, the low-resolution annual ring data #1 and #2 in FIG. 44, and the meta annual ring data #1 and #2 in FIG. 45 on the optical disk 7 as shown in FIG. ~~27~~ 46.

Please replace paragraphs 1 and 2 at page 144, with the following rewritten paragraph:

When the meta annual ring size ~~T_s~~ $\underline{T_{sm}}$ is larger than the audio annual ring size T_{sa} and the video annual ring size T_{sv} (when the meta annual ring size T_{sm} is 20 seconds while the audio annual ring size T_{sa} and the video annual ring size T_{sv} are two seconds, for example), as in the case of the large low-resolution annual ring size T_{sl}, it is possible to read only metadata from the optical disk 7 in a short time. Thus, using a time code or the like included in the metadata, for example, a specific frame in a video file as main line data can be retrieved quickly.

Thus, when shuttle reproduction or transfer to the outside of low resolution data is required to be performed at high speed, the low-resolution annual ring size T_{sl} is increased. When quick retrieval of a frame is required, the meta annual ring size ~~T_s~~ $\underline{T_{sm}}$ is increased. Thereby a highly convenient optical disk 7 meeting the requirements can be provided.

Please replace paragraph 1 at page 147, with the following rewritten paragraph:

The priority order at the time of recording on the optical disk 7 can be order of meta annual ring data, audio annual ring data, video annual ring data, and low-resolution annual ring data. In this case, as shown in FIG. 47, for example, the meta annual ring data #1 and #2, the audio annual ring data #1 and #2, the video annual ring data #1 and [#4] #2, and the low-resolution annual ring data #1 and #2 are recorded from the inner circumference side to the outer

circumference side of the optical disk 7 in order of the meta annual ring data #1, the audio annual ring data #1, the video annual ring data #1, the low-resolution annual ring data #1, the meta annual ring data #2, the audio annual ring data #2, the video annual ring data #2, the low-resolution annual ring data #2, ...

Please replace paragraph 2 at page 155 continuing onto page 156, with the following rewritten paragraph:

A file obtaining unit 302 recognizes file names of the file unit metadata file, the frame unit metadata file, the auxiliary file, the video file, the audio file of each of the eight channels, and the low resolution file by referring to the master file stored in the buffer 301. The file obtaining unit 302 makes the disk drive device 11 read the file unit metadata file, the frame unit metadata file, the auxiliary file, the video file, the audio file of each of the eight channels, and the low resolution file from the optical disk 7 on the basis of the file names, and thereby obtains the file unit metadata file, the frame unit metadata file, the auxiliary file, the video file, the audio file of each of the eight channels, and the low resolution file via the buffer 301. Further, the file obtaining unit 302 supplies the obtained file unit metadata file and the frame unit metadata file to a metadata file processing unit 303, supplies the auxiliary file to an auxiliary file processing unit 304, supplies the video file to a video file processing unit 305, and supplies the audio file of each of the eight channels to an audio file processing unit 306. The file obtaining unit 302 also supplies the low resolution file to a buffer ~~309~~ 308.

Please replace paragraph 4 at page 156 continuing onto page 157, with the following rewritten paragraph:

The audio file processing unit ~~105~~ 306 extracts audio data of each channel from the audio file of each of the eight channels supplied from the file obtaining unit 302. Further, the audio file

processing unit 306 constructs sound items in which the audio data of each channel is multiplexed and disposed, and then supplies the sound items to the data synthesizing unit 307.

Please replace paragraph 2 at page 159, with the following rewritten paragraph:

The channel multiplexing unit 324 multiplexes the audio data of each channel supplied from the data converting unit ~~124~~ 323 in sample units. The channel multiplexing unit 324 supplies multiplexed audio data obtained as a result of the multiplexing to a KLV encoder 325.

Please replace paragraphs 1 and 2 at page 166, with the following rewritten paragraph:

In step S332, the header/footer removing unit 321 of the audio file processing unit ~~106~~ 306(FIG. 52) removes a header and a footer from the audio file of each of the eight channels supplied from the file obtaining unit 302, and then supplies a body of each channel remaining as a result of the removal to the KLV decoder 322. The process proceeds to step S333. In step S333, the KLV decoder 322 disintegrates a KLV structure of the body of each channel supplied from the header/footer removing unit 321. The KLV decoder 322 supplies thereby obtained audio data in the WAVE format of each channel to the data converting unit 323. The process proceeds to step S334.

In step S334, the data converting unit 323 converts the audio data in the WAVE format of each channel supplied from the KLV decoder 322 into audio data in the AES3 format of each channel. The data converting unit 323 then supplies the audio data in the AES3 format of each channel to the channel multiplexing unit 324. The process proceeds to step S335. In step S335, the channel multiplexing unit 324 multiplexes the audio data of each channel supplied from the data converting unit ~~124~~ 323. The channel multiplexing unit 324 supplies multiplexed audio

data obtained as a result of the multiplexing to the KLV encoder 325. The process proceeds to step S336.